

What is claimed is:

1. A method for converting materials for modifying surfaces of semiconductor nanoparticles wherein semiconductor nanoparticles are modified with oil-soluble materials for surface modification, the oil-soluble materials for surface modification are converted into water-soluble materials for surface modification at the interface between an organic solvent and water, and the semiconductor nanoparticles are shifted from an organic phase to an aqueous phase by said conversion.

2. A method for purifying semiconductor nanoparticles wherein semiconductor nanoparticles, the surfaces of which have been modified with the water-soluble materials for surface modification obtained by the method according to claim 1, are subjected to size-selective photoetching, thereby regulating particle sizes of the semiconductor nanoparticles and monodispersing them.

3. A method for purifying semiconductor nanoparticles wherein semiconductor nanoparticles, the surfaces of which have been modified with the water-soluble materials for surface modification obtained by the method according to claim 1, are subjected to size-selective photoetching, and dissolution caused thereby is utilized to peel the surfaces of the semiconductor nanoparticles, thereby converting the materials for surface modification.